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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,944	06/01/2001	Michael I. Catherwood	18153.0040	8704

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EXAMINER

DO, CHAT C

ART UNIT PAPER NUMBER

2193

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/870,944

Applicant(s)

CATHERWOOD, MICHAEL I.

Examiner

Chat C. Do

Art Unit

2193

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>09/06/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is responsive to Amendment filed 09/06/2005.
2. Claims 1 and 3-5 are pending in this application. Claim 1 is an independent claim. In Amendment, claims 2 and 6-7 are cancelled. This Office Action is made non-final after a RCE filed 09/06/2005.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 3-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishida et al. (U.S. 4,945,507).

Re claim 1, Ishida et al. disclose in Figures 1-2 a system for overflow (e.g. 34 as overflow detection and prevention) and saturation processing (e.g. 28, 32, 22 in Figure 1 as saturation selection operands) comprising: an adder (e.g. 10), operatively connected to receive first (e.g. 12) and second operands (e.g. 16), and connected to add the operands to produce a result of the added operands (e.g. 22); an accumulator (e.g. 46), operatively connected to store at least a portion of the result of the added operands (e.g. least 20 bits input into 48) or at least a portion of a selected one of predetermined constants (e.g. from

either 28 or 32 when saturate encountered) based on control signals (e.g. 42 and 40); the accumulator including guard bits (e.g. D22 and D23 in Figure 2), operatively connected to store the remaining portion of the result of the added operands (e.g. the most significant bits of output of adder 10) or the remaining portion of the selected one of predetermined constants based on the control signals (e.g. when feedback of accumulate); overflow logic (e.g. 34) operatively connected to the accumulator and to the guard bits so as to indicate overflow of the accumulator (e.g. output of 34 as 42 and 40); and saturation logic (e.g. 28, 32, 22, and 24), operatively connected to the adder (e.g. 10), to the guard bits (e.g. Figure 2), and connected to provide the control signals based on at least a portion of the result of the added operands and at least a portion of the guard bits (e.g. Figure 2); and logic means (e.g. Figure 2 particularly 66) for comparing most significant bits of the guard bits and most significant bit of the result of the added operands and for generating the control signals (e.g. 42 and 40) in accordance with the comparison.

Re claim 3, Ishida et al. further disclose in Figures 1-2 the saturation logic includes a selector (e.g. 24) operatively connected to selectively provide a one of the result of the added operands or a one of the predetermined constants based on the comparison (e.g. either from 28, 32, or 22).

Re claim 4, Ishida et al. further disclose in Figures 1-2 the logic means includes means (e.g. 34) for providing the control signals in accordance with an enable signal and in accordance with the comparison (e.g. 42 and 40).

Re claim 5, Ishida et al. further disclose in Figures 1-2 the logic means responsive to the comparison (e.g. 34 and Figure 2 in particular with part 66), for selectively

providing the control signals (e.g. 42 or 40) so that the accumulator stores at least a portion of the result of the added operands and the guard bits store the remaining portion of the result of the added operands (e.g. if no overflow), or the accumulator stores at least a portion of a predetermined constant and the guard bits store the remaining portion of the predetermined constant (e.g. otherwise the content of either 28 or 32 is stored depending on the direction control signal).

Response to Amendment

5. The amendment filed 09/06/2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

The limitation “the accumulator including guard bits” is considered as new matter in the disclosure because the accumulator does not include guard bits, but the guard bits are used in conjunction and placed next to the accumulator as seen in Figure 2 and specification page 4, wherein the specification is point to part 60 of Figure 2 is 32 accumulator which consisting of bits b0-b31.

Applicant is required to cancel the new matter in the reply to this Office Action.

Response to Arguments

6. Applicant's arguments filed 09/06/2005 have been fully considered but they are not persuasive.

a. The applicant argues in page 5 last paragraph for independent claim 1 that the cited reference by Ishida fails to disclose a system for overflow and saturation processing comprising “an accumulator including guard bits, operatively connected to store the remaining portion of the result of the added operands or the remaining portion of the selected one of predetermined constants based on the control signals” as cited in the claimed invention.

The examiner respectfully submits that “the accumulator including guard bits” limitation is considered as new matter in the disclosure as clearly stated above. Thus, this limitation is disregarded in the claim. In addition, the previous Office action clearly addresses every limitations in the claim as “the accumulator including guard bits (e.g. D22 and D23 in Figure 2), operatively connected to store the remaining portion of the result of the added operands (e.g. the most significant bits of output of adder 10) or the remaining portion of the selected one of predetermined constants based on the control signals (e.g. when feedback of accumulate)”.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

b. U.S. Patent No. 6,819,971 to Alidina et al. disclose a fast computation of overflow flag in a bit manipulation unit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chat C. Do whose telephone number is (571) 272-3721. The examiner can normally be reached on M => F from 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chaki Kakali can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chat C. Do
Examiner
Art Unit 2193

November 8, 2005

A handwritten signature in black ink, appearing to be 'Chat C. Do', with a large, stylized loop at the end.